



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,306	03/12/2004	Roger W. Engelbart	7784-000624	8142

27572 7590 02/22/2005

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

JARRETT, RYAN A

ART UNIT PAPER NUMBER

2125

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Am

Office Action Summary

Application No.

10/799,306

Applicant(s)

ENGELBAR ET AL

Examiner

Ryan A. Jarrett

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 37-39 is/are allowed.
- 6) ☒ Claim(s) 1-20 and 24-36 is/are rejected.
- 7) ☒ Claim(s) 21-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/20/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/18/05 have been fully considered but they are not persuasive. With respect to Holmes et al., Applicant argues, "Nowhere is it described or suggested, however, what kind of machine might be used to make repairs, nor is it described how such a machine would automatically discard or repair the affected region. Holmes et al. do not describe or suggest automatically causing the fiber placement machine to return to a defect location to make such repairs." However, Holmes et al. does in fact disclose that it is the fiber placement head that automatically makes the repairs by altering the placement of the fiber tapes (col. 7 lines 19-22).

Information Disclosure Statement

2. In the IDS filed 1/20/05, U.S. Patent document reference #3 has not been considered. It appears that this publication number has been miss-typed.

Claim Objections

3. Claims 37 and 38 are objected to because of the following informalities:

In claim 37 line 4, "the material" should be changed to "a material".

In claim 38 line 4, "the material" should be changed to "a material".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-19 and 24-36 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Holmes et al. U.S. Patent No. 6,799,619. For example, Holmes et al. discloses a method comprising: using a material placement machine to lay one or more courses and one or more plies of composite material to form a composite structure; electronically accessing positional data defining a defect location on the composite structure; and automatically causing the material placement machine to return to the defect location as defined by the positional data; wherein the automatically causing includes automatically causing the material placement machine to place material sufficient for repairing a defect at the defect location; wherein the automatically causing includes automatically causing the material placement machine, after completing a ply of the composite structure, to return to a course of the ply in which a defect is located and place material along the course sufficient for repairing the defect; wherein the automatically causing includes creating a program to automatically generate instructions in connection with the positional data, for causing the material placement machine to return to the defect location as defined by the positional data and place material

sufficient for repairing the defect at the defect location; wherein the program extracts positional data from a first file (e.g., camera) to a second file (e.g., controller) and generates instruction with the second file; further comprising determining whether a defect is repairable by the material placement machine without user intervention, and wherein the automatically causing includes automatically causing the material placement machine to repair a defect determined to be repairable by the material placement machine without user intervention; further comprising inspection the composite structure for defects; further comprising determining whether a defect is unacceptable, and wherein the automatically causing includes automatically causing the material placement machine to return to a defect determined to be unacceptable (e.g., col. 6 line 4 – col. 7 line 23, col. 8 lines 23-36).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holmes et al. as applied to claim 13 above. Holmes et al. does not *explicitly* disclose that the exterior monitoring of the material application position of the material placement machine comprises determining a first distance from a first reference point of the composite structure to a defect. However, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to modify Holmes et al. to include this feature so that the controller of Holmes et al. would know where to direct the material placement machine. The camera of Holmes et al. sends the defect data to the controller. It would have been obvious that in order to properly direct the material placement machine to the defect, the defect data received by the controller from the camera would need to be defined based on some sort of reference point or origin.

Allowable Subject Matter

8. Claims 37-39 are allowed.
9. Claims 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or fairly suggest exterior monitoring of a material application position of a material placement machine to determine a first distance from a first reference point of a composite structure to a defect; wherein the monitoring includes detecting and counting transitions between contrasting portions of a code ring coupled for common rotation with a compaction roller, in combination with the remaining features and elements of the claimed invention.

The prior art of record fails to teach or fairly suggest exterior monitoring of a material application position of a material placement machine to determine a first distance from a first reference point of a composite structure to a defect; further comprising summing courses completed to produce a total completed course count; and multiplying a predetermined course width by the total completed course count to determine a second distance from a second reference point of the composite structure to the defect, in combination with the remaining features and elements of the claimed invention.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2125

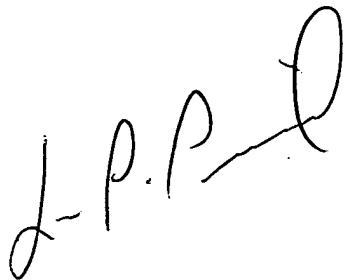
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan A. Jarrett whose telephone number is (571) 272-3742. The examiner can normally be reached on 10:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan A. Jarrett
Examiner
Art Unit 2125

2/15/05

A handwritten signature in black ink, appearing to read 'L. Picard', with a stylized flourish at the end.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100